

Title (en)  
CONTROL VALVE

Title (de)  
REGELVENTIL

Title (fr)  
SOUPAPE DE COMMANDE

Publication  
**EP 1590590 B1 20111123 (EN)**

Application  
**EP 03797018 A 20031215**

Priority  
• US 0339860 W 20031215  
• US 35805003 A 20030204

Abstract (en)  
[origin: US2004149950A1] An ANSI Leakage Class V control valve having consistent shut off characteristics with a reduced actuator force required to open and close the valve is provided. The trim arrangement of the control valve includes a valve cage having a multi-contoured inner surface. The multi-contoured inner surface can include a plurality of surfaces. The multi-contoured surface can include first, second, and third perimeter surfaces, and a first transition surface disposed between and coupling the first and second perimeter surfaces, and a second transition surface disposed between and coupling the second and third perimeter surfaces. The valve also includes a valve plug disposed at one end of a valve stem. The valve plug controls the fluid flow through the valve. The valve plug includes an opening through the plug for equalizing pressure across the valve plug. An annular channel is formed within a wall of the valve plug and is sized to accommodate a sealing ring. The sealing ring engages the second perimeter surface to form a fluid seal that substantially hinders fluid leakage through the valve.

IPC 8 full level  
**F16K 3/24** (2006.01); **F16K 39/02** (2006.01); **F16K 47/08** (2006.01)

CPC (source: EP US)  
**F16K 3/243** (2013.01 - EP US); **F16K 47/08** (2013.01 - EP US); **Y10T 137/86734** (2015.04 - EP US); **Y10T 137/86759** (2015.04 - EP US)

Cited by  
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FR GB

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**US 2004149950 A1 20040805**; **US 6851658 B2 20050208**; AU 2003297945 A1 20040906; AU 2003297945 B2 20090924; BR 0318029 A 20051206; CA 2514607 A1 20040826; CA 2514607 C 20091124; EP 1590590 A1 20051102; EP 1590590 B1 20111123; MX PA05008256 A 20051005; MY 137044 A 20081231; NO 20053426 D0 20050714; NO 20053426 L 20060829; NO 330605 B1 20110523; RU 2005127628 A 20060120; RU 2324099 C2 20080510; WO 2004072527 A1 20040826

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